

EXHIBIT 2

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

CHASOM BROWN, WILLIAM BYATT,)
JEREMY DAVIS, CHRISTOPHER) CASE NO.:
CASTILLO, and MONIQUE TRUJILLO,) 5:20-cv-03664-
individually and on behalf of) LHK-SVK
all other similarly situated,)
Plaintiffs,)
v.)
GOOGLE, LLC,)
Defendant.)

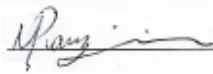
DEPOSITION OF GLENN BERNTSON
VOLUME I
REMOTELY IN LOS ANGELES, CALIFORNIA
FRIDAY, MARCH 18, 2022

REPORTED BY: NATALIE PARVIZI-AZAD, CSR, RPR, RSR
CSR NO. 14125
JOB NO.: 5142481

<p>1 UNITED STATES DISTRICT COURT 2 NORTHERN DISTRICT OF CALIFORNIA 3 SAN JOSE DIVISION 4 _____ 5) 6 CHASOM BROWN, WILLIAM BYATT,)CASE NO.: 7 JEREMY DAVIS, CHRISTOPHER) 8 CASTILLO, AND MONIQUE TRUJILLO,)5:20-cv-03664- 9 INDIVIDUALLY AND ON BEHALF OF)LHK-SVK 10 ALL OTHER SIMILARLY SITUATED,) 11) 12 Plaintiffs,) 13) 14 v.) 15) 16 GOOGLE, LLC,) 17) 18 Defendant.) 19 _____) 20) 21) 22) 23) 24) 25)</p> <p>DEPOSITION OF GLENN BERNTSON, VOLUME I TAKEN ON BEHALF OF THE PLAINTIFFS REMOTELY VIA ZOOM VIDEO CONFERENCING, IN LOS ANGELES, CALIFORNIA, BEGINNING AT 10:36 A.M. AND ENDING AT 5:01 P.M., ON FRIDAY, MARCH 18, 2022, BEFORE NATALIE PARVIZI-AZAD, CERTIFIED SHORTHAND REPORTER NUMBER 14125.</p>	<p>1 A P P E A R A N C E S 2 3 FOR THE DEFENDANTS, GOOGLE, LLC: 4 QUINN EMANUEL URQUHART AND SULLIVAN 5 BY: JOSEF ANSORGE, ESQ. 6 BY: TRACEY GAO, ESQ. 7 300 I STREET NORTHWEST 8 SUITE 900 9 WASHINGTON, DC 20005 10 (202) 538-8000 11 JOSEFANSORGE@QUINNEMANUEL.COM 12 TRACYGAO@QUINNEMANUEL.COM 13 14 ALSO PRESENT: 15 JOANN YAGER, VIDEOGRAPHER; 16 TONI BAKER, GOOGLE IN-HOUSE COUNSEL 17 18 19 20 21 22 23 24 25</p>
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<p>1 A P P E A R A N C E S 2 3 FOR THE PLAINTIFF, CHASOM BROWN, WILLIAM BYATT, 4 JEREMY DAVIS, CHRISTOPHER CASTILLO, AND MONIQUE 5 TRUJILLO, INDIVIDUALLY AND ON BEHALF OF ALL OTHER 6 SIMILARLY SITUATED: 7 BOIES SCHILLER FLEXNER 8 BY: MARK MAO, ESQ. 9 BY: ERIKA NYBORG-BURCH, ESQ. 10 44 MONTGOMERY STREET 11 41ST FLOOR 12 SAN FRANCISCO, CALIFORNIA 94104 13 (415) 293-6800 14 MMAO@BSFLLP.COM 15 - AND - 16 SUSMAN GODFREY 17 BY: AMANDA BONN, ESQ. 18 1900 AVENUE OF THE STARS 19 SUITE 1400 20 LOS ANGELES, CALIFORNIA 90067 21 (310) 789-3131 22 ABONN@SUSMANGODFREY.COM 23 24 25</p> <p>FOR THE PLAINTIFFS IN "CALHOUN V GOOGLE": SIMMONS HANLY CONROY BY: AN TRUONG, ESQ. 112 MADISON AVENUE 7TH FLOOR NEW YORK, NEW YORK 10016 (212) 257-8482 ATRUONG@SIMMONSFIRM.COM</p> <p>APPEARANCES CONTINUED ON THE FOLLOWING PAGE.</p>	<p>1 I N D E X 2 3 WITNESS PAGE 4 GLENN BERNTSON 5 EXAMINATION BY MS. BONN 7 6 7 8 E X H I B I T S 9 EXHIBIT NO. DESCRIPTION PAGE 10 11 EXHIBIT 1 OUTLINE OF TOPICS 61 12 EXHIBIT 2 UNIFIED ID LINKAGE DESIGN 99 13 EXHIBIT 3 GOOGLE ANALYTICS DATA 146 14 COLLECTION OVERVIEW 15 EXHIBIT 4 LETTER FROM GOOGLE DATED 155 16 MARCH 17, 2022 17 EXHIBIT 5 UNIFIED ID LINKAGE STORAGE; 158 18 BATES GOOGCABR00399972 19 20 21 22 23 24 25</p>
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<p>1 A. Yeah. I can tell you what I know, 2 which is less than the information I know about 3 PPID. And I know about PPID because it's one 4 of the things my team does.</p> <p>5 For CRM ID, CRM ID was introduced 14:55:42 6 after PPID when our buy-side teams realized, 7 "Oh, PPID, what a good idea." And we actually 8 asked our partner to provide us an ID about 9 users /the primary use case for why PPID -- 10 well, there are two primary use cases for PPID. 14:56:07 11 One of them for why it was introduced is that, 12 for publishers who have a direct relationship 13 with the user, they can use that knowledge of a 14 direct relationship with a user to be able to 15 be able to represent the same user across 14:56:24 16 different devices.</p> <p>17 A good use case would be Spotify. 18 When you use Spotify, even if it's a free 19 account, you're logging in. You have an 20 identifier. And if you use Spotify on a phone 14:56:39 21 and you use Spotify on a web browser, Spotify 22 still knows you're the same person. And so, 23 when they interact with Ad Manager, they can 24 take your e-mail address, hash it, and then 25 share it with Ad Manager. 14:56:57 Page 130</p>	<p>1 conversions.</p> <p>2 Q. Other than these two -- let's -- I'll 3 call them signed-in identifiers -- that either 4 a publisher or an advertiser provides to 5 Google, PPID and CRM ID, is there any other ID 14:59:13 6 like that that -- that you can think of, or 7 those are the two primary ones that are being 8 used right now?</p> <p>9 MR. ANSORGE: Objection. Form, 10 compound, and mischaracterizes prior testimony, 14:59:27 11 and vague.</p> <p>12 THE WITNESS: Can you reword that? 13 I'm -- I'm not quite sure I understand your 14 question.</p> <p>15 BY MS. BONN: 14:59:38</p> <p>16 Q. Yeah. Let me go back and ask -- let 17 me go back. Let me go back to CRM ID.</p> <p>18 A. Okay.</p> <p>19 Q. CRM ID mapped Biscottis, where is that 20 mapping stored, if you know? 14:59:51</p> <p>21 A. To be clear, I -- the term "mapping" 22 versus "linking" are different within Google's 23 vocabulary. And you're using it in a way that 24 doesn't make sense to me because mapping 25 corresponds to when it's the same ID that's 15:00:12 Page 132</p>
<p>1 Ad Manager will then -- remember how I 2 described, we receive the hashed value that we 3 get from the publisher, we hash it again, and 4 we store it with a network ID so if the same 5 publisher is interacting with you on the web 14:57:15 6 and interacting with you on your phone, we'll 7 see you as the same person across those devices 8 for that one publisher with PPID. And we 9 designed it that way.</p> <p>10 CRM ID saw that capability and said, 14:57:34 11 "Wouldn't it be great if we could offer the 12 same capability to advertisers?" And one of 13 their big use cases was, again, conversions so 14 that they could see the same user and map 15 conversions across different devices. The 14:57:47 16 difference with CRM ID is that, unlike PPID, 17 where we basically maintain one ID though it's 18 represented differently at different places -- 19 client-side versus serving-side, but it's still 20 one ID -- for CRM ID, they do actually map 14:58:11 21 Biscotti to the CRM ID.</p> <p>22 And as it relates to functionality, 23 it's -- it's really just a different 24 implementation. I don't know a ton about CRM 25 ID, but again, one of the primary use cases is 14:58:48 Page 131</p>	<p>1 just represented using a string client side and 2 an integer side, but it's still the same ID. 3 Linking is where you might have multiple 4 different IDs that are then linked to one other 5 ID. So I wouldn't call what CRM ID does as 15:00:32 6 mapping, really. It's more of a linking.</p> <p>7 Q. Where would that --</p> <p>8 A. Just to --</p> <p>9 Q. I didn't mean to interrupt, I'm sorry. 10 And I appreciate you clarifying. It helps us 15:00:50 11 to make sure we're using language in the same 12 way.</p> <p>13 Where does that linking, between a CRM 14 and a Biscotti, where does that sit within 15 Google? 15:01:06</p> <p>16 A. The storage of that linkage? I'm 17 trying to understand your question.</p> <p>18 Q. Let's say -- let's say I wanted to 19 know whether a particular CRM ID had a -- had 20 been linked with a Biscotti. Is there 15:01:31 21 something I could query to find that out? Is 22 that linkage stored somewhere?</p> <p>23 A. I believe the linkage would be stored 24 somewhere. And given the way our storage 25 mechanisms work, I believe that the storage 15:01:50 Page 133</p>

<p>1 mechanism would be [REDACTED]. But again, this is 2 something that's so far away from my technical 3 knowledge, I would be speculating, sort of, 4 beyond that.</p> <p>5 Q. And -- and I appreciate that. And 15:02:11 6 it's helpful, at any point, if you aren't 7 certain about something, it's perfectly fine 8 to -- just to say that.</p> <p>9 You said that based on, I think, your 10 more general knowledge, you believe the storage 15:02:24 11 mechanism for the CRM to Biscotti linkage would 12 be in [REDACTED].</p> <p>13 What makes you think that?</p> <p>14 A. Google is quite careful about where 15 different types of data are stored. And if you 15:02:41 16 have data keyed via user ID and you're in ads, 17 there is one place you store user-keyed data, 18 and that's [REDACTED]. The only exceptions to that 19 are two types. One is [REDACTED], and [REDACTED] is basically 20 [REDACTED]. It's just slightly updated 15:03:07 21 infrastructure that's been tuned to the ads' 22 use cases, and so it can use fewer resources in 23 terms of the way caches are maintained, et 24 cetera, because it's been tuned to a bunch of 25 ads use cases. 15:03:23</p> <p style="text-align: right;">Page 134</p>	<p>1 And so, for those consumer products, 2 they'll store the data in spanner, but they 3 have their own protected instances in terms of 4 the way permissions are granted, et cetera.</p> <p>5 But when in ads, because we're really storing 15:05:09 6 just highly-structured, very specific data 7 about users, we're just using [REDACTED].</p> <p>8 I'm sorry, go ahead.</p> <p>9 Q. What are some -- can you just give me 10 like an example of the type of consumer target 15:05:23 11 product where they would store it in spanner?</p> <p>12 A. Gmail.</p> <p>13 Q. Got it. Okay. Okay. I have a 14 question about -- going back to the 15 hypothetical we were talking about earlier, 15:06:07 16 ad -- how an ad is served through Ad Manager.</p> <p>17 Does Google analytics data inform or 18 play a role in the process of how or what ad is 19 served through Ad Manager?</p> <p>20 A. In one very limited use case. 15:06:27</p> <p>21 Q. And what is that case?</p> <p>22 A. If there is a publisher who has an Ad 23 Manager account, and the same publisher has a 24 Google Analytics account, and within their 25 Google Analytics account, they build user lists 15:06:56</p> <p style="text-align: right;">Page 136</p>
<p>1 [REDACTED] is a generic Google database 2 that has been designed for storing data 3 associated with keys. And it was realized very 4 early on that, Oh, if we build this in a way 5 that it's super easy to sort of maintain 15:03:43 6 security, et cetera, around this, it's like a 7 perfect, you know, ID storage database. That's 8 how [REDACTED] was designed. So because that's the 9 way [REDACTED] was designed, I'm pretty sure that's 10 where they're storing the data. 15:03:59</p> <p>11 Q. And you said there are only two 12 exceptions, and then you mentioned [REDACTED].</p> <p>13 What was the second exception?</p> <p>14 A. The second exception is if you have 15 the whole product that's a consumer-targeted 15:04:10 16 product, you can store user data in the 17 spanner. And the spanner is Google's general 18 relational database mechanism. It's the 19 equivalent of, you know, an Oracle database if 20 you're -- if another company is using Oracle, 15:04:34 21 or MySQL, et cetera. So it's Google's internal 22 relational database, and so Gmail, Maps, et 23 cetera, these consumer products Google 24 supports, a lot of data is keyed off of those 25 user IDs. 15:04:57</p> <p style="text-align: right;">Page 135</p>	<p>1 based off of user browsing behavior on their 2 site -- which is a functionality Google 3 Analytics supports -- that publisher can choose 4 to export one or more of these lists of users 5 that they've created in Google Analytics to Ad 15:07:18 6 Manager.</p> <p>7 And when they do so, this user list 8 that they've exported from Google Analytics to 9 Google Ad Manager can be used to target ads in 10 Google Ad Manager, specifically for 15:07:36 11 reservations.</p> <p>12 Q. And when you say that this is a 13 limited use case, are you using the word 14 "limited" because it's very specific or because 15 it is not widely implemented? 15:07:59</p> <p>16 A. Kind of both. The vast majority of Ad 17 Manager publishers don't use this feature. 18 It's a pretty small number of Ad Manager 19 publishers that use the Google Analytics 20 exported user lists. And to turn it on, you 15:08:24 21 literally have to go through all of these steps 22 to sort of link the accounts and export these 23 lists. It's a very manual process.</p> <p>24 Q. And what about on the conversion side? 25 Is -- does Google Analytics data play a role in 15:08:43</p> <p style="text-align: right;">Page 137</p>

<p>1 MS. BONN: Great. Likewise. Maybe we 2 can go off the record for the moment. 3 MR. ANSORGE: Yeah. I'm fine with 4 that. We can go off the record. Thanks. 5 THE VIDEOGRAPHER: This concludes the 17:01:29 6 deposition. We're going off the record at 7 5:01 p.m. 8 (Deposition concluded at 5:01 P.M.) 9 -oOo- 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p style="text-align: right;">Page 182</p>	<p>1 CERTIFIED STENOGRAPHER'S CERTIFICATE 2 STATE OF CALIFORNIA)) SS. 3 COUNTY OF LOS ANGELES) 4 5 I, NATALIE PARVIZI-AZAD, HERBY CERTIFY: 6 I AM A DULY QUALIFIED CERTIFIED SHORTHAND 7 REPORTER IN THE STATE OF CALIFORNIA, HOLDER OF 8 CERTIFICATE NUMBER CSR 14125 ISSUED BY THE COURT 9 REPORTERS BOARD OF CALIFORNIA AND WHICH IS IN FULL 10 FORCE AND EFFECT. (BUS. & PROF. § 8016) 11 I AM NOT FINANCIALLY INTERESTED IN THIS 12 ACTION AND NOT A RELATIVE OR EMPLOYEE OF ANY 13 ATTORNEY OF THE PARTIES, OR OF ANY OF THE PARTIES. 14 (CIV. PROC. § 2025.320(A)) 15 I AM AUTHORIZED TO ADMINISTER OATHS OR 16 AFFIRMATIONS PURSUANT TO CALIFORNIA CODE OF CIVIL 17 PROCEDURE, SECTION 2093 (B) AND PRIOR TO BEING 18 EXAMINED, THE DEPONENT WAS FIRST PLACED UNDER OATH 19 OR AFFIRMATION BY ME. (CIV. PROC. §§ 2025.320, 20 2025.540(A)) 21 I AM THE CERTIFIED OFFICER THAT 22 STENOGRAPHICALLY RECORDED THE TESTIMONY IN THE 23 FOREGOING PROCEEDING AND THE FOREGOING TRANSCRIPT 24 IS A TRUE RECORD OF THE TESTIMONY GIVEN. (CIV. 25 PROC. § 2025.540(A))</p> <p style="text-align: right;">Page 184</p>
<p>1 STATE OF CALIFORNIA)) SS. 2 COUNTY OF LOS ANGELES) 3 4 5 I, GLENN BERNTSON, HEREBY CERTIFY UNDER 6 PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF 7 CALIFORNIA THAT THE FOREGOING IS TRUE AND CORRECT. 8 EXECUTED THIS ____ DAY OF _____, 9 2022, AT _____, CALIFORNIA. 10 11 12 13 14 15 _____ 16 GLENN BERNTSON 17 18 19 20 21 22 23 24 25</p> <p style="text-align: right;">Page 183</p>	<p>1 I HAVE NOT, AND SHALL NOT, OFFER OR PROVIDE 2 ANY SERVICES OR PRODUCTS TO ANY PARTY'S ATTORNEY 3 OR THIRD PARTY WHO IS FINANCING ALL OR PART OF THE 4 ACTION WITHOUT FIRST OFFERING SAME TO ALL PARTIES 5 OR THEIR ATTORNEYS ATTENDING THE PROCEEDING AND 6 MAKING SAME AVAILABLE AT THE SAME TIME TO ALL 7 PARTIES OR THEIR ATTORNEYS. (CIV. PROC. § 8 2025.320(B)) 9 I SHALL NOT PROVIDE ANY SERVICE OR PRODUCT 10 CONSISTING OF THE CERTIFIED STENOGRAPHER'S 11 NOTATIONS OR COMMENTS REGARDING THE DEMEANOR OF 12 ANY WITNESS, ATTORNEY, OR PARTY PRESENT AT THE 13 PROCEEDING TO ANY PARTY OR ANY PARTY'S ATTORNEY OR 14 THIRD PARTY WHO IS FINANCING ALL OR PART OF THE 15 ACTION, NOR SHALL I COLLECT ANY PERSONAL 16 IDENTIFYING INFORMATION ABOUT THE WITNESS AS A 17 SERVICE OR PRODUCT TO BE PROVIDED TO ANY PARTY OR 18 THIRD PARTY WHO IS FINANCING ALL OR PART OF THE 19 ACTION. (CIV. PROC. § 2025.320(C)) 20 DATED: MARCH 23, 2022 21 22 23  24 25 NATALIE PARVIZI-AZAD, CSR NO.14125</p> <p style="text-align: right;">Page 185</p>